

# (19) United States

# (12) Patent Application Publication (10) Pub. No.: US 2020/0225778 A1 Lewty et al.

### Jul. 16, 2020 (43) **Pub. Date:**

#### (54) COMPUTER SYSTEM WITH COLOR SAMPLING STYLUS

(71) Applicant: Apple Inc., Cupertino, CA (US)

(72) Inventors: Nicholas C. Lewty, Singapore (SG); Mahdi Nezamabadi, San Jose, CA (US); Po-Chieh Hung, Sunnyvale, CA (US); Tze Yong Poh, Singapore (SG)

(21) Appl. No.: 16/682,857

(22) Filed: Nov. 13, 2019

### Related U.S. Application Data

(60) Provisional application No. 62/792,321, filed on Jan. 14, 2019.

#### **Publication Classification**

(51) Int. Cl. G06F 3/0354 (2006.01)G06F 3/0488 (2006.01)G06F 3/041 (2006.01) (52) U.S. Cl.

CPC ...... G06F 3/03545 (2013.01); G06F 3/04162 (2019.05); **G06F** 3/04883 (2013.01)

#### (57)ABSTRACT

A device such as a computer stylus may have a color sensor. The color sensor may have a plurality of photodetectors each of which measures light for a different respective color channel. The color sensor may also have one or more light-emitting devices. Control circuitry may use the lightemitting devices to illuminate an external object while using the photodetectors to measure reflected light to determine the color of the external object. The electronic device may have a housing with an elongated shaft. The shaft may have a tip and an opposing end. The tip may be configured to emit electromagnetic signals that are detected by a touch sensor in a touch sensitive display. The color sensor may be located at the end opposite the tip, may be located at the tip, or may be optically coupled to the tip using a light guide.

